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| EXAMINER | |
|---|---|
| JARRETT, SCOTT L | |
| **ART UNIT** | **PAPER NUMBER** |
| 3623 | |

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/898,463 | MIFUNE ET AL. | |
| | Examiner | Art Unit | |
| | Scott L. Jarrett | 3623 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. This **Final** Office Action is responsive to Applicant's amendment filed October 12, 2005. Applicant's amendment amended claims 1-19. Currently claims 1-19 are pending.

### *Response to Amendment*

2. Applicant's amendment filed on October 12, 2005 with respect to amended claims 1-19 necessitated new ground(s) of rejection.

The Objection to the Drawings is withdrawn in response to Applicant's submittal of corrected figures.

The Objection to claims 9-10 is withdrawn in response to Applicant's amendments to claims 9-10.

The 35 U.S.C. 112 (1) rejection of claims 4 and 14 is withdrawn in response to Applicant's amendments to claims 4 and 14.

The 35 U.S.C. 112 (2) rejection of claims 1, 4, 11, 14 and 19 is withdrawn in response to Applicant's amendments to claims 1, 4, 11, 14 and 19.

### *Response to Arguments*

3. Applicant's arguments with respect to Claims amended claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

It is noted that the applicant did not challenge the Official Notice(s) cited in the previous office action therefore those statements as presented are herein after prior art. Specifically it has been established that it was old and well known in the art at the time of the invention:

- to schedule appointments for the earliest possible start time;

- to schedule appointments for the earliest possible start time wherein the earliest start time of an appointment is determined by the earliest possible availability of one or a plurality of resources necessary for the appointment;

- to minimize the idle time a user spends before or during the provision of a service; and

- to reschedule a delayed appointment to the next available appointment.

***Title***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: System and Method for Scheduling Medical Examinations Utilizing Queues and Providing Medical Examination Route Guide Information to the Scheduled Examinations.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waytena et al., U.S. Patent No. 6,748,364 in view of Katz, James, Simulation or Outpatient Appointment Systems (1969) and further in view of Butz, Andreas et al., A Hybrid Indoor Navigation System (2001).

Regarding Claims 1 and 19 Waytena et al. a method and system for enabling patrons "to obtain information about waiting times for various attractions, amusements, or services throughout an amusement park or other service area, make reservations for certain ones of these, be alerted when a desired attraction becomes available, and be updated when changes are made to reservations. Furthermore, it is desirable to allow a patron to effectively "wait" in line while engaging in other activities in the park--such as purchasing concessions or attending other attractions--so that the time spent waiting is otherwise productive, thus reducing the feeling of having wasted time when delays or malfunctions occur.", (Abstract; Column 2, Lines 36-48).

More specifically Waytena et al. teach a system and method for scheduling appointments (reservations) between one or more services/service providers (rides, attractions) and users (patrons, customers) comprising:

- a plurality of wireless display devices (PDA, handheld, phone, etc.; personal communication devices, PCD; Figure 1, Element 102) that have a display part and a communication part held by each user waiting for a service/service provider (Abstract; Figures 1A-1B, Element 102);

- forming individual service provider queues and sequentially queuing user's (patron's) reservations/appointments with one or more service providers (e.g. patrons request attraction reservations for either a specific time or the next available time slot/position in the attractions queue, the system then validates the request and creates provisional reservations for one or more attractions which the patron then confirms/accepts and generates a schedule of reservations as part of the patrons trip/visit at an amusement park; Column 3, Lines 22-37 and 59-68Column 10, Lines 19-60; Figures 2, 2C-2D, Element 210, 3);

- scheduling first/second reservations (appointments) such that the start time of the first reservation (appointment) is calculated (determined) and the second (subsequent) reservation start time is calculated/determined to start after the first reservation, previously confirmed with respect to the queues (e.g. reserving the next available time/queue position and/or request a specific time, which must be available prior to being confirmed/scheduled; Column 14, Lines 55-63; Column 20, Lines 55-65; Column 22, Lines 39-50; Figures 2, 2C-2D, 3, 5C-5D, 7); and

- a plurality of displays (personal communication devices, PCD; Figure 1, Element 102) capable of displaying guidance information (e.g. users current location, ride/attraction/reservation location, nearby attractions/rides, park information, etc.),

appointments in a scheduler (reservations; Column 14, Lines 25-37; Column 18, Lines 11-14; Figures 5C-5D) and information from a plurality of user (patron) wireless display devices and a wireless communication means for communication with the plurality of user wireless display devices (Column 14, Lines 25-45; Column 6, Lines 22-36; Column 22, Lines-31-47; Figures 1, 5C-5E);

- forming (displaying, providing, presenting, etc.) information concerning reservation guidance including an individual reservation order (Column 14, Lines 25-37; Figures 5C-5E) and starting time based on the waiting queues on one of the plurality user/patron wireless display devices (alerts, reminders, position in line, etc.; Column 2, Lines 35-45; Column 3, Lines 43-60; Column 13, Lines 36-43; Column 18, Lines 60-68; Figures 5C-5E);

- displaying the reservation for each user (patron) and providing information regarding the users current location and the reservation/appointment location (travel time, etc.; Column 14, Lines 25-47; Column 15, Lines 5-40; Figures 5C-5E); and

- monitoring by staff personal/management of the plurality of service provider queues as well as user/patron reservations schedules wherein queue data structures (list, graphs, arrays, etc.) depict such things as queue loads (Column 6, Lines 22-36; Column 22, Lines-31-47).

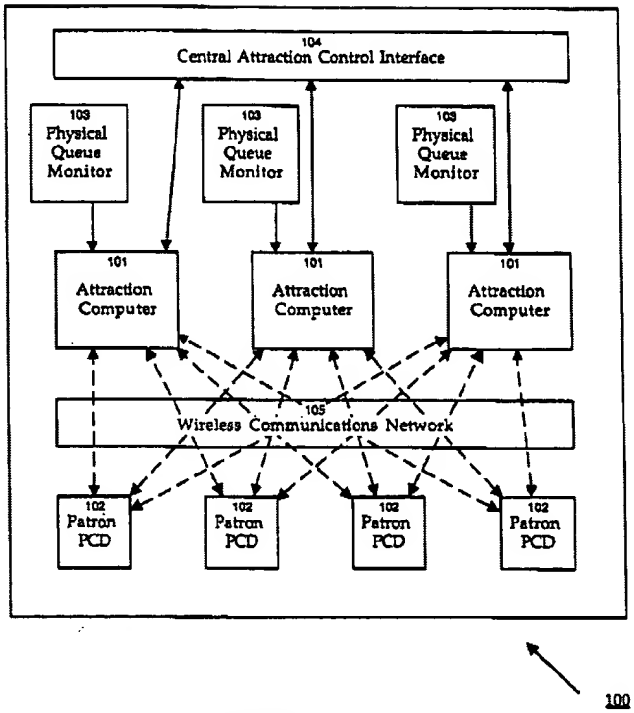


FIGURE 1

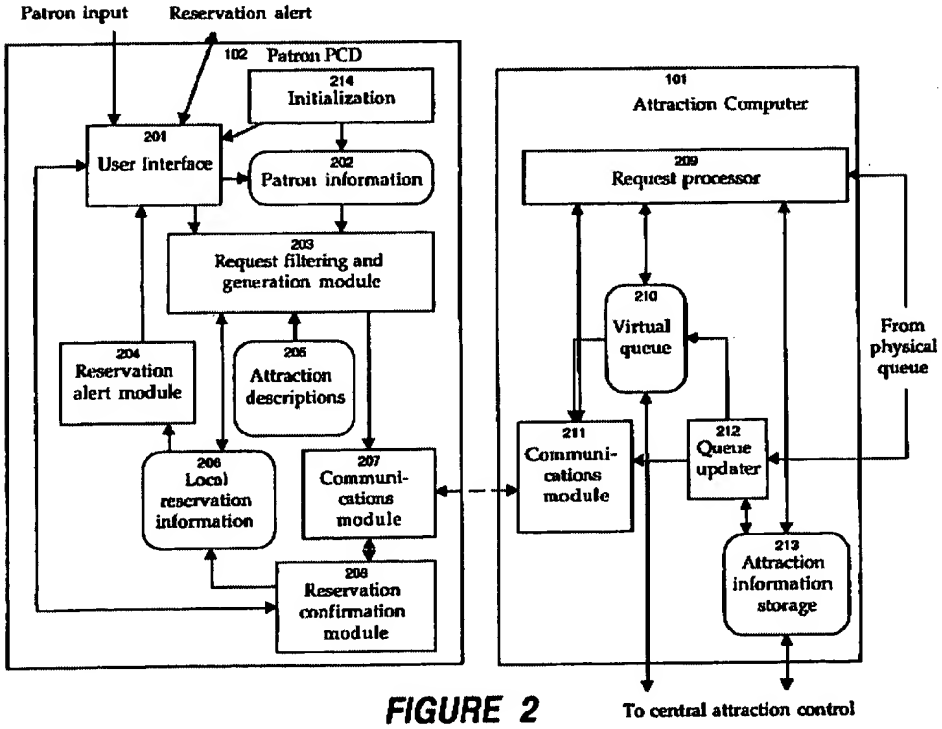


FIGURE 2

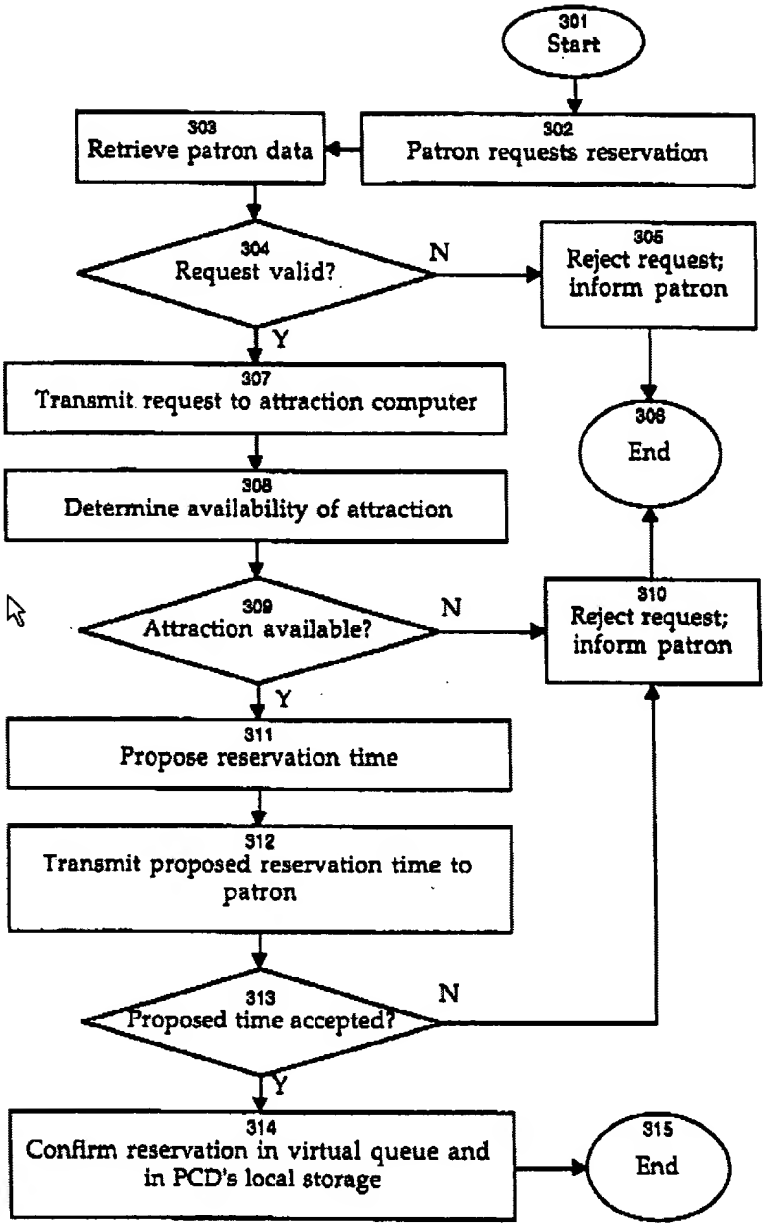
301
Start
302
Patron requests reservation
303
Retrieve patron data
304
Request valid?
N
305
Reject request; inform patron
Y
307
Transmit request to attraction computer
306
End
308
Determine availability of attraction
309
Attraction available?
N
310
Reject request; inform patron
Y
311
Propose reservation time
312
Transmit proposed reservation time to patron
313
Proposed time accepted?
N
Y
314
Confirm reservation in virtual queue and in PCD's local storage
315
End

FIGURE 3

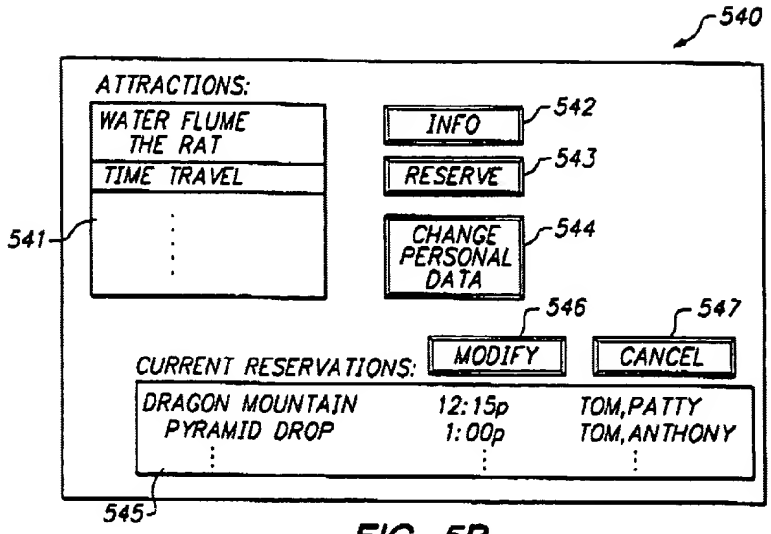
540
ATTRACTIONS:
WATER FLUME
THE RAT
TIME TRAVEL
541
INFO
542
RESERVE
543
CHANGE PERSONAL DATA
544
546
MODIFY
547
CANCEL
CURRENT RESERVATIONS:
DRAGON MOUNTAIN
PYRAMID DROP
12:15p
1:00p
TOM,PATTY
TOM,ANTHONY
545

FIG. 5B

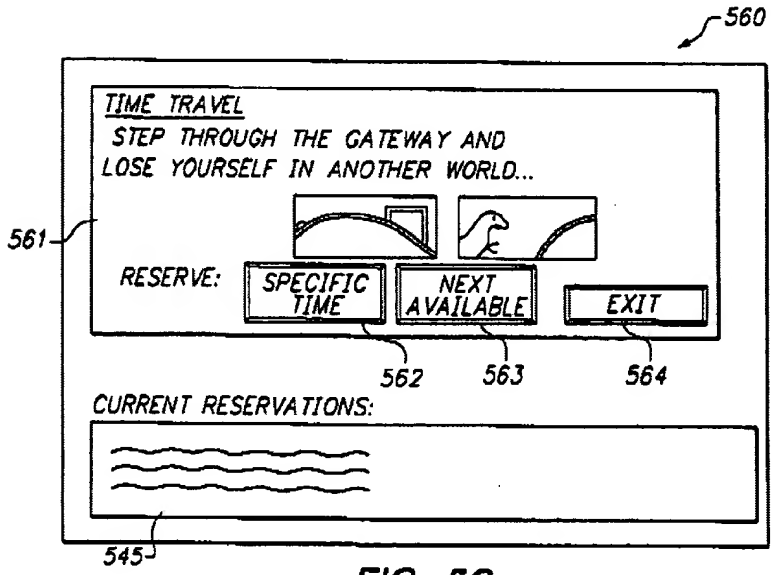
560
TIME TRAVEL
STEP THROUGH THE GATEWAY AND
LOSE YOURSELF IN ANOTHER WORLD...
561
RESERVE:
SPECIFIC TIME
NEXT AVAILABLE
EXIT
562
563
564
CURRENT RESERVATIONS:
545

FIG. 5C

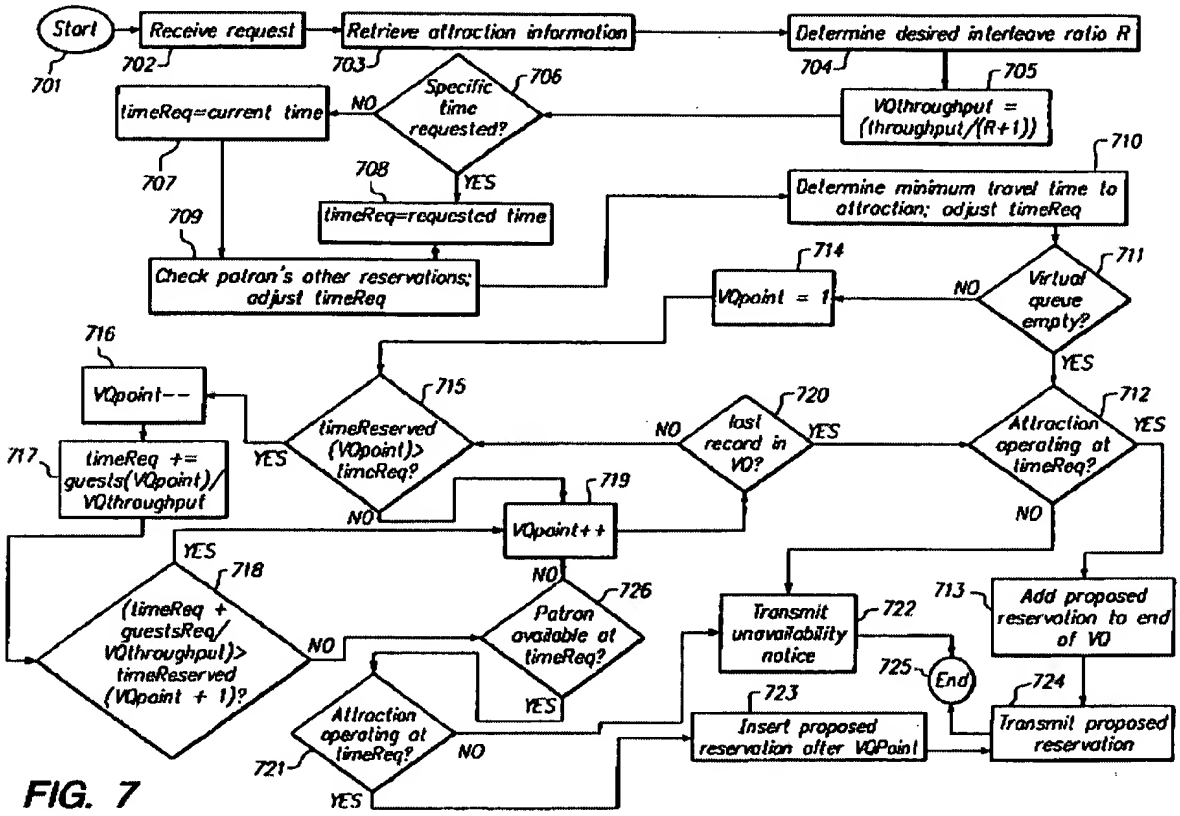


FIG. 7

Waytena et al. further teaches that the use of one or more related queues (waiting lines) for scheduling appointments (Column 1, Lines 58-68; Column 2, Lines 1-8) as well as notifying users (patrons), via wireless devices, when a service/service provider is available (Column 2, Lines 9-15) is old and well known.

Waytena et al. does not expressly teach that the service/service provider appointment scheduling system and method is utilized for scheduling patient medical examination and/or related medical examination items (intended field of use) as claimed.

Katz teaches scheduling medical examinations (clinic visit) and medical examination items (activities, tasks, tests, treatments, resources, etc.) for patients wherein the system/method forms a plurality of patient and examination item (detailed list of examination activities) waiting queues (patient queue, consultation queue, special queue, etc.) in an analogous art of appointment/reservation scheduling for the purposes of minimizing/balancing patient and physician waiting/idle time (Column 1, Paragraph 2, Page 215).

More generally Katz teaches a method and system for evaluating/simulating the performance of any of a plurality of well known medical examination appointment scheduling systems/methods/approaches wherein the system/method accounts for a plurality of information when evaluating the performance (e.g. in terms of patient waiting time) including but not limited to service time (actual, average), appointment/examination, cancellations, no-shows, number of patients/physicians, sequence of facilities (examination/examination items) needed by patients, multiple facilities, determining the arrival and completion time for appointments/medical examinations and the like (lab, x-ray, etc.; Column 2, Page 216; Section 2.3, page 217; Column 1, Page 218; Column 1, Last Paragraph, Page 219; Column 1, Section 4.2, Page 220).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling appointments between a plurality of service providers and users as taught by Waytena et al. would have been adapted to schedule

any of a plurality of service/service provider appointments including but not limited to the scheduling of medical/medical examination items (offices, human resources, equipment, tools, supplies, etc.) in view of the teachings of Katz; the resultant system optimizing/minimizing the amount of time patients spend waiting in line (Waytena et al.: Column 2, Lines 36-48; Katz: Column 1, Paragraph 2, Page 215).

While Waytena et al. teach that the system and method for scheduling and managing a plurality of reservations/appointments includes information on the current and future locations of users, location of the plurality of attractions, the ability to filter/reject reservations based on a user's proximity to/travel time to a request attraction reservation, the system/method's ability to provide information attractions in close proximity to the user and the like (Column 8, Lines 3-29; Column 13, Lines 39-43; Column 13, Lines 25-47; Column 15, Lines 5-41, Column 18, Lines 50-68) Waytena et al. does not expressly teach providing guidance information in the form of at least one of a *dynamic map* and *directions* to a next scheduled appointment as claimed (emphasis added).

Butz et al. teach providing guidance information in the form of at least one of a dynamic map and directions to a next scheduled appointment ("Can I take you to your 1PM appointment with Mr. Grey?", Column 1, Paragraph 2, Page 25), in an analogous art of user scheduling and/or route navigation (way finding) for the purposes of assisting

users in navigating unknown and/or unfamiliar locations (Section 1 Introduction, Page 25; Figures 2, 4-5).

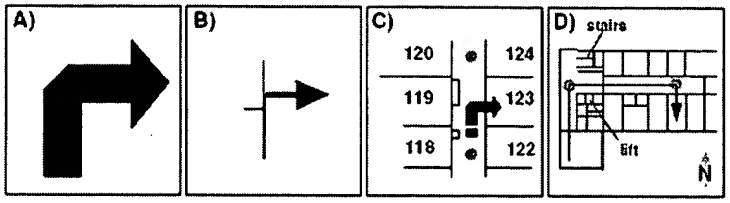


Figure 2: Four different graphical way description schemata that depend on the quality of orientation and position information.

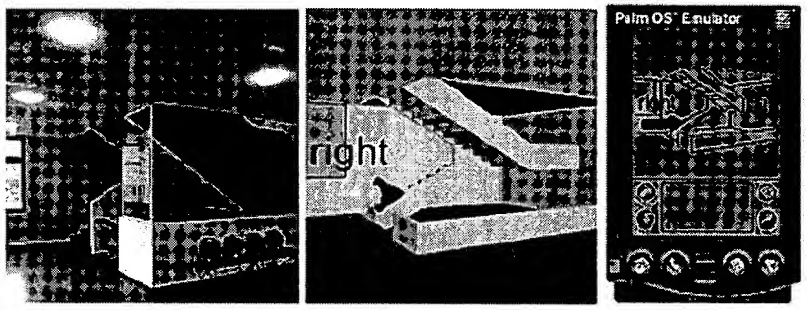


Figure 4: Picture of a hallway and two graphical presentations of the same place, one on a graphics screen, the other on the Palm Pilot

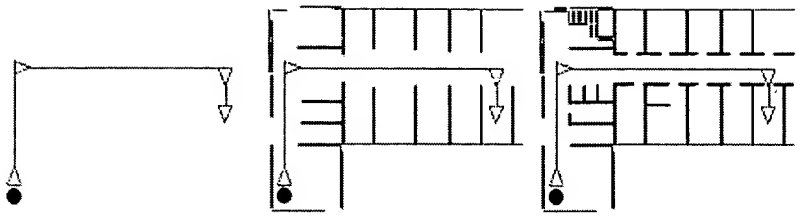

Figure 5: Incremental transmission of vector graphics: First an arrow depicting the path is shown, then the floor plan is transmitted in several steps, longest lines first.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling an appointment for patients as taught by the combination of Waytena et al. and Katz with its knowledge of the user's current location and the location of the reservation/appointment as well as its ability to provide a plurality of guidance information to users (patients, patrons) would have benefited from providing guidance additionally information in the form of at least one of a *dynamic map* and *directions* to a next scheduled appointment/reservation in view of the teachings of Butz et al.; the resultant system/method further assisting users in navigating unknown and/or unfamiliar locations (Section 1 Introduction, Page 25; Figures 2, 4-5) and/or finding their way to scheduled appointments/reservations.

While Waytena et al. teach displaying waiting queues, as a queue data structures, and other queue/reservation related information to service providers (park staff, management personal) as well as providing patrons with information regarding their position in the ride/attraction queue, ride/attraction wait times, reservation/schedule

changes and the like (Column 6, Lines 22-36; Column 11, Lines 3-7; Column 22, Lines-31-47) Waytena et al. does not expressly teach displaying the waiting queues for each *user* as a queue data structure as claimed (emphasis added).

Official notice is taken that queue data structures (arrays, linked list, waiting lines, etc.) provide a convenient and/or well-understood mechanism (metaphor) for graphically depicting a queue wherein the depiction provides (communicates) a plurality of information related to the queue such as its length, service speed/length and even a persons place/position in the line. Further it is noted that the depiction of queues, such as those taught by Waytena et al. provide information similar to the information users would gain if they were "physically" in the queue instead of the virtual queue.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling medical appointments as taught by the combination of Waytena et al. and Katz with its ability to display each service providers (physician, medical examination item) queue using a queue data structure to service providers (physicians, clinics, etc.) would have benefited from providing the display of the queue to users (patients) in view of the teachings of official notice; the resultant system/method providing a convenient mechanism to display/communicate a patron's individual position in the waiting line similar to the kind of "tactile" information users would have if they were "physically" present in the waiting line/queue.

Regarding Claim 11 Waytena et al. teach a system and method for scheduling reservations/appointments comprising

- a plurality of wireless display devices (personal communication devices) that have a display part and a communication part held by each user waiting for a service/service provider (Column 3, Lines 8-33; Figures 1-1B, Element 102);

- a scheduler (subsystem) comprising:

- a waiting queue means for forming individual service/service provider and sequentially queuing service appointments/reservations of users (Column 3, Lines 22-37 and 59-68; Column 10, Lines 19-60; Figures 2-2D, 3);

- a waiting queue means for forming user waiting queues and sequentially queuing service/service provider reservations for the to be scheduled appointments (Column 3, Lines 22-37 and 59-68; Column 10, Lines 19-60; Figures 2-2D, 3);

- scheduling first/second appointments/reservations such that the start time of the first medical examination is calculated (determined) and the second (subsequent) appointment start time is calculated/determined to start after the first appointment, previously confirmed with respect to the queues (Column 14, Lines 55-63; Column 20, Lines 55-65; Column 22, Lines 39-50; Figures 2-3, 5C-5D, 7); and

- server (subsystem) comprising:

- a plurality of displays capable of displaying guidance information, appointments in a scheduler (calendar, schedule, etc.) and information from a plurality of user wireless display devices and a wireless communication means for communication with the

plurality of user wireless display devices (Column 6, Lines 22-36; Column 14, Lines 25-45; Column 18, Lines 11-14; Column 22, Lines 31-47; Figures 1-1A, 5C-5E);

- forming (displaying, providing, presenting, etc.) information concerning appointment/reservation guidance including an individual appointment/reservation order, starting time based on the waiting queues on one of the plurality user wireless display devices (Column 6, Lines 22-36; Column 14, Lines 25-45; Column 18, Lines 11-14; Column 22, Lines 31-47; Figures 1-1A, 5C-5E); and

- determining that the completion time of an reservation/appointment for one of the reservations/appointments is delayed (Column 3, Lines 34-42; Column 11, Lines 8-25);

- utilizing an empty queue time period (time slot, appointment, etc.) so that a time for a next appointment is available for each of the reservations/appointments (Column 20, Lines 60-65; Column 22, Lines 39-50; Column 23, Lines 56-65; Figure 7);

- representing (determining, calculating, forming, etc.) a starting time as a leading queue when an empty queue time period (available time slot, appointment, queue position, etc.) exists within the queue and representing a starting time, when no empty queue time period (available appointment, empty id, free time slot, open queue position, etc.) exists by the time immediately following the final (last) user completes a reservation/ appointment to that the time registered with the waiting queue means for reservations/appointments by calculating the time to start from a time when an appointment is available in an service/service provide (i.e. scheduling the appointment to start at the earliest available time coinciding with the earliest availability of the

service/service provide such that the next available time to start/schedule an appointment is either the earliest available appointment/position in the ride/attraction queues or the appointment/position in the ride/attraction queues immediately following the last appointment/position in the queue; traversing the queue, gap; Column 10, Lines 19-60; Column 17, Lines 45-60; Column 19, Lines 21-31; Column 20, Lines 55-68; Column 22, Lines 39-50; Column 23, Lines 55-68; Figures 2D, 7; Equations 2-4); and

Waytena et al. does not expressly teach that the service/service provider appointment scheduling system and method is utilized for scheduling patient medical examination and/or related medical examination items (intended field of use) as claimed.

Katz teaches scheduling medical examinations (clinic visit) and medical examination items (activities, tasks, tests, treatments, resources, etc.) for patients wherein the system/method forms a plurality of patient, medical examination and examination item (detailed list of examination activities) waiting queues (patient queue, consultation queue, special queue, etc.) in an analogous art of appointment/reservation scheduling for the purposes of minimizing/balancing patient and physician waiting/idle time (Column 1, Paragraph 2, Page 215).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling appointments between a plurality of service providers and users as taught by Waytena et al. would have been adapted to schedule any of a plurality of service/service provider appointments including but not limited to the scheduling of medical/medical examination items (offices, human resources, equipment, tools, supplies, etc.) in view of the teachings of Katz; the resultant system optimizing/minimizing the amount of time patients spend waiting in line (Waytena et al.: Column 2, Lines 36-48; Katz: Column 1, Paragraph 2, Page 215).

Waytena et al. does not expressly teach providing guidance information in the form of at least one of a *dynamic map* and *directions* to a next scheduled appointment as claimed (emphasis added).

Butz et al. teach providing guidance information in the form of at least one of a dynamic map and directions to a next scheduled appointment (Column 1, Paragraph 2, Page 25), in an analogous art of user scheduling and/or route navigation (way finding) for the purposes of assisting users in navigating unknown and/or unfamiliar locations (Section 1 Introduction, Page 25; Figures 2, 4-5).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling an appointment for patients as taught by the combination of Waytena et al. and Katz with knowledge of the users current location

and the location of the reservation/appointment as well as its ability to provide a plurality of guidance information to users (patients, patrons) would have benefited from additionally providing guidance information in the form of at least one of a *dynamic map* and *directions* to a next scheduled appointment/reservation in view of the teachings of Butz et al.; the resultant system/method further assisting users in navigating unknown and/or unfamiliar locations (Butz et al.: Section 1 Introduction, Page 25; Figures 2, 4-5) and/or finding their way to scheduled appointments/reservations.

Waytena et al. does not expressly teach displaying the waiting queues for each *user* as a queue data structure as claimed (emphasis added).

Official notice is taken queue data structures (arrays, linked list, waiting lines, etc.) provide a convenient and/or well understood mechanism (metaphor) for graphically depicting a queue wherein the depiction provides (communicates) a plurality of information related to the queue such as its length, service speed/length and even a persons place/position in the line. Further it is noted that the depiction of queues, such as those taught by Waytena et al. provide information similar to the information users would gain if they where "physically" in the line instead of virtually in line.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling medical appointments as taught by the combination of Waytena et al. and Katz with its ability to display each ride's queue using

a queue data structure to service providers (physicians, clinics, etc.) would have benefited from providing the display of the queue to patients in view of the teachings of official notice; the resultant system/method providing a convenient mechanism to display/communicate a patient's individual position in the waiting line similar to the kind of "tactile" information users would have if they were "physically" present in the waiting line/queue.

While Waytena et al. teach updating/revising the queues/reservation schedules based on patron and/or attraction delays/events (Column 3, Lines 4-42; Column 11, Lines 8-25) Waytena et al. does not expressly teach determining that the completion time of an reservation/appointment for one of the reservations/appointments is delayed for at *least an average time required* for the service/service provider (appointment, reservation) as claimed (emphasis added).

Katz teaches that the system/method for scheduling medical examinations takes into account expected (average, typical) vs. actual service times as well as probabilities that patients and/or physicians will be delayed/late for a scheduled appointment (i.e. that the appointment/reservation time will exceed the expected and/or typical service time; Section 2.3, Column 1, Page 217; Column 2, Bullet 3, Page 217; Column 1, Paragraph 1, Page 218; Section 4.2, Page 220), in an analogous art of appointment scheduling for the purposes of minimizing/optimizing the scheduling of appointments

and/or understanding a particular schedule's performance (Column 2, Paragraph 2, Page 222).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for scheduling medical appointments as taught by the combination of Waytena et al. and Katz would have benefited from determining that the completion time of an reservation/appointment for one of the reservations/appointments is delayed for at *least an average time required* for the service/service provider in view of the teachings of Katz; the resultant system/method enabling service providers (park management) to identify queues (attractions) that are becoming delayed/taking longer than expected (i.e. slower throughput, etc.) so that the appointments (reservations) in the queue (scheduled) can be adjusted accordingly (Waytena et al.: Column 3, Lines 50-60; Column 11, Lines 9-25; Column 19, Lines 21-31; Column 21, Lines 57-68; Column 22, Lines 1-11; Figure 2).

Regarding Claims 3, 5, 7-8, 13, 15 and 17-18 Waytena et al. teach a medical examination system and method further comprising a means to access the system (database) from an external network (Column 6, Lines 37-59).

Regarding Claims 4 and 14 Waytena et al. teach an appointment/reservation scheduling method and system further comprising:

- determining at least one of when no confirmation is given from a first user (patron), who has completed an appointment/reservation, during a predetermined time period before an appointment time of a first service/service provide item of the waiting queue means for individual users/patrons and when a second user, who has an appointment, has applied for cancellation (i.e. determining if a patient has not confirmed an appointment, no-show, and determining if a patient has cancelled an appointment; Column 3, Lines 44-60; Column 19, Lines 21-31; Column 21, Lines 57-68; Column 22, Lines 1-8; Figure 7);

- eliminating at least one of the appointment of the first patient at the appointment of the second patient from the patient waiting queue means and means for moving (updating, shuffling, re-scheduling, etc.) at least one of the remaining patients who have been queued in the patient waiting queue means for medical examination items, to an empty queue (available time slot, empty queue ID, available queue position, gap, etc.), which eliminated the at least one of the appointment of the first or second patient (i.e. if a patient cancels or does not show up for an appointment, removing the appointment from the schedule/queue and moving/rescheduling another patient into the now available/empty appointment time slot/queue position) so that reappointments become possible (Column 3, Lines 50-60; Column 19, Lines 21-31; Column 20, Lines 55-68; Column 21, Lines 58-68; Column 22, Lines 1-8 and 43-50; Figure 7);

- providing notices of cancellations to user (patrons) who have been queued in the patient waiting queue means and have not scheduled an appointment and providing notices of change of appointments are given to users (patrons) who already have

appointments (Column 3, Lines 33-43; Column 11, Lines 8-25; Column 19, Lines 63-68).

Regarding Claims 6 and 16 Waytena et al. teach an appointment/reservation scheduling method and system further comprising:

- determining when a user completes a appointment/reservation (i.e. rides the attraction) for eliminating (removing, deleting, etc.) an entry related to the reservation/appointment from the queue (de-queuing the patron once they have completed/finished their reservation; Column 3, Lines 50-60; Column 19, Lines 21-31; Column 21, Lines 58-68; Column 22, Lines 1-8); and

- determining when a patient does not complete a medical examination in a predetermined period of time (e.g. delayed, running late, etc.) and for changing times of patients in the patient waiting queue means to a next appointment time period that is available so as to be delayed while following the waiting queue means for individual patients (i.e. re-scheduling patrons effected by the delay, no-show, closure or ride, etc.; "The patron has the opportunity to cancel the reservation at any time if desired. If the reservation is not canceled, the patron proceeds to the attraction, where a sensor detects the patron's entry, and updates the stored virtual queue accordingly. The continual monitoring of patrons: arriving at the attraction, and updating of the virtual queue enables the attraction computer to dynamically determine future reservation times for other patrons. The attraction computer maintains data on the numbers of patrons, reservations times, cancellations and the like, to provide reports to the staff.",

Column 3, Lines 50-60; Column 11, Lines 9-25; Column 19, Lines 21-31; Column 21, Lines 57-68; Column 22, Lines 1-11; Figure 2, Element 212, "queue updater").

Regarding Claims 9-10 Waytena et al. teach an appointment scheduling method and system further comprising:

- a personal computer (computer) installed in service provide site (ride/attraction computer/subsystem) site; the personal computer comprising a communication means for communicating at close range with the user's (patron's) wireless display device and communicating with the server (Column 5, Lines 40-64; Column 19, Lines 21-31; Figure 1, Elements 101, 102); and

- a control means for outputting information relating to the arrival of the user (patron) and the completion of the appointment/reservation by the user/patron (departure, arrival, ride completion, no-show, etc.; Column 19, Lines 21-31; Column 21, Lines 57-68; Column 22, Lines 1-11).

7. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waytena et al., U.S. Patent No. 6,748,364 in view of Katz, James, Simulation or Outpatient Appointment Systems (1969) and further in view of Butz, Andreas et al., A Hybrid Indoor Navigation System (2001) as applied to claims 1 and 11 above, and further in view of Hirsch et al., WO 97/25682.

Regarding Claims 2 and 12 Waytena et al. teach a system and method for scheduling appointments wherein the system/method seeks to minimize the amount of time users/patrons spend "waiting in line" and maximize their productive time (i.e. enjoying the rest of the park, attractions, etc.) as discussed above.

Waytena et al. does not expressly teach that the system and method for scheduling appointments/reservations:

- maintains an unconfirmed (temporary, provisional, etc.) state of the entire appointment process (schedule, queues, etc.) in case an interval between a start time of the first appointment and a completion time of an appointment for a last (final) reservation/appointment item becomes at least equal to a predetermined amount of time and one of the reservations/appointments starts with an empty queue time period (available appointment, reservation, open position in queue, etc.);

- changing the empty queue time period to a void queue (skip, scheduled, unavailable, not free, etc.) that can not be utilized again; and

- repeating the appointment process (optimizing, re-scheduling, etc.); and

- confirming the entire appointment process (i.e. finalizing/confirming the schedule) when the interval between the starting time of the first appointment and the completion time of the last/final medical examination item (i.e. the patient's total examination time from start of first appoint to completion of last appointment) becomes less than a predetermined amount of time (e.g. minimizing patient appointments/visit to meet/beat a target/threshold time) and one of the medical examination item starts with a non-empty queue time period (i.e. at least one of the needed medical examination items can not be scheduled for an earlier time slot/appointment).

Katz teaches optimizing/minimizing the time patients and/or physicians are idle and/or waiting in line are "fundamental measures of performance" for medical examination scheduling systems and methods (Column 2, Paragraph 2, Page 222).

Hirsch et al. teach a medical examination system and method for scheduling medical appointments wherein the system/method comprises

- not confirming a schedule if it is not feasible (i.e. does not meet all the system constraints);

- utilizing a two step optimization process comprising the determination of all the feasible (meet resource availability and other constraint requirements, tentative/proposed/unconfirmed schedule) and the selects the optimal schedule based on the constraints/cost functions provided ("...displaying to a user visual representations

of a plurality of optimal schedules...", Page 5, Line 29; Page 5, Lines 10-15; Page 10, Lines 1-8; Figure 13);

- repeating (retrying, re-running, restarting, etc.) the scheduling process (optimization process) until all the system constraints (policies, procedures, criteria, etc.) are met (Page 18, Lines 24-26);

- revising (updating, rescheduling) the schedule by "...taking into account actual conditions and the initial optimal schedule." (Page 5, Lines 23-24);

- determining and utilizing an inconvenience period, defined as the difference between the appointment start time requested and start time scheduled, as a schedule optimization constraint/criteria to ensure users requested start times are not scheduled later than a predetermined amount/threshold (Page 14, Lines 13-20); and

- enabling the grouping (consolidating) of medical procedures/cases (Page 19, Lines 11-14).

More generally Hirsch et al. teach that the medical procedure scheduling method and system:

- utilizes a plurality of computing platforms (Page 12, Lines 26-27) wherein the computing platform includes a computer, network connectivity and wireless communication subsystem ("paging software"; Page 13, Line 15, Page 14, Line 5);

- has a client server architecture (distributed computing consisting of one or more client devices and a server; Page 13, Lines 7-9);

- provides a graphical user interface (Figures 1-12);

- includes an appointment scheduler subsystem (component, module, software, code, etc.) comprising ("...identifying the resources required for performing each of said plurality of medical procedures and determining every feasible schedule for the plurality of medical procedures...", Page 4, Lines 9-13; Page 18, Lines 1-27; Figures 11, 14A-14B):

  - a queue (ordered list, array, sequence, schedule, line, etc.) of patients ("first come first serve" policy/procedure, Page 19, Lines 2-5; Page 10, Lines 1-7 and 15-17; Page 15, Lines 26-30; Page 16, Lines 1-9; Figures 2-3);
  - a schedule for each examination item (equipment, resources, personnel, etc.; Page 6, Lines 10-19; Figures 4-12); and
  - a schedule for each patient comprising examination items needed for patient's examination (Page 6, Lines 10-19; Figure 11);

- a schedule optimization subsystem (engine) wherein schedules are optimized utilizing well known and commercially available systems (e.g. CPLEX; Page 19, Lines 19-23) that optimize cost functions/custom optimization criteria/factors/constraints including but not limited to: priorities, unscheduled events, waiting lists (e.g. queues), precedence (e.g. order, sequence of events) and the like (Page 10, Lines 7-9; Page 11, Lines 1-30; Figure 13);

- scheduling a plurality of patient medical procedures (cases, equipment, personnel, etc.) based on user requests (e.g. surgeons requests a plurality of resources to perform a medical procedure for a patients) include start time/day, required resources

(operating room, equipment, personnel/staff, etc.) and a plurality of system constraints, hospital policies/procedures (Pages 11-12; Figure 13).

- displays schedules (images, icons, text, etc.) corresponding to the appointment schedule of medical procedures (patients, equipment, surgeons, etc.) including the location of patients (e.g. the operating room being utilized by a patient at a particular moment in time; Figures 14A-14B);

- generating (forming, determining, etc.) and displaying examination guidance to individual patients wherein the guidance comprises the order and start times for each of the scheduled medical equipment/items (e.g. appointment/schedule information; Page 10, Lines 1-8; Page 18, Lines 1-15; Figures 11-12).

Hirsch et al. further teach that the medical procedure scheduling system and method:

- divides days into a plurality of time slots, i.e. a day representing a schedule/queue of sequentially scheduled appointments, wherein some of the time slots are empty (physically vacant, unused, not-scheduled, etc.; Column 14, Lines 9-20; Figures 14A-14B);

- determines and utilizes an inconvenience period, defined as the difference between the appointment start time requested and start time scheduled, as a schedule optimization constraint/criteria to ensure a users' requested start time is not scheduled later than a predetermined amount/threshold (Page 14, Lines 13-20);

- treats appointment schedule requests on a first come first serve basis (e.g. a FIFO queue; Page 19, Lines 2-15); and

- determines the average times to perform medical procedures (Page 16, Lines 25-28) and utilizes that time to determine expected appointment completion time (Page 18, Lines 10-15).

Neither Waytena et al., Katz, Butz et al nor Hirsch et al. expressly minimizing/optimizing a patient's total examination time (i.e. schedule/rescheduling until the patient's total examination time is at least a predetermined amount of time) claimed.

Official notice is taken that minimizing the idle (unused, wasted, waiting, etc.) time a user (patient, individual, customer, etc.) spends before or during the provision of a service is old and well known. For example it is old and well known to minimize the time individuals spend waiting in line to meeting to a service representative such as a physician for a scheduled medical appointment thereby reducing the frustration felt by customers who are left unattended for extended period of time. One such schedule minimization technique is grouping (consolidating) medical procedures together so as to minimize the number of trips a person would have to make to a doctor; instead of scheduling one phase of a medical examination/procedure to occur at its earliest possible time, for example on Tuesday, just to fill in an available/empty time slot and asking the patient to come back on Friday for the second phase of a medical examination/procedure when it is possible to schedule the patient to have both phases of the procedure conducted on the Friday.

It would have been obvious to one skilled in the art at the time of the invention that the medical, with its ability to be optimize (finalize, confirm) medical procedure schedules utilizing any of a plurality of custom constraints (e.g. minimize the inconvenience of patients waiting for medical procedures) as taught by the combination of Waytena et al., Katz, Butz et al nor Hirsch et al..; would have benefited from optimizing the schedule to minimize a patient's total examination time (i.e. from start of the patient's first medical equipment/station appointment to the completion/end time of the patient's last medical equipment/station) is greater than or equal to some/any predetermined time limit (e.g. maximum allowable wait/exam time) in view of official notice; the resultant system improving the satisfaction by lessening the frustration of patients waiting for scheduled medical procedures (Katz: Introduction, Page 215).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Klein, Eric, U.S. Patent No. 5,541,845, teaches a system and method for monitoring the adherence to pre-planned route schedules (a series of appointments/times and locations). Klein further teaches a plurality of known dynamic route/dynamic guidance information systems and methods.

- Schloss et al., U.S. Patent No. 5,692,125, teach a system and method for scheduling and managing a plurality of linked (associated, dependent, interdependent,

etc.) events (e.g. interdependent/dependent medical appointments, activities, group calendaring, etc.; linked lists) wherein one or more of the events/group of events can be cancelled, postponed and/or modified based on dynamic events/external conditions such that these changes are propagated throughout the entire schedule. Schloos et al. further teach that the scheduling system/method can be used to schedule a series/sequence of interrelated medical examinations/appointments and that system/method provides notices of the propagated schedule changes.

- McCullough et al., U.S. Patent No. 5,912,630, teach a system and method for managing multiple service queues wherein the system/method identifies "mishaps" that result in a unacceptable/unreasonable service delays (i.e. service time is about a desired time). McCullough et al. further teach a plurality of old and very well known service queue systems/methods.

- Kanemitsu, Hiroyki, U.S. Patent No. 5,924,075, teach a system and method for forming custom route guidance information (itinerary, trip plan) wherein a series/sequence of appointments (destinations, locations, facilities, etc.) to be visited is scheduled.

- Dussell et al., U.S. Patent No. 5,938,721, teach a system and method for managing and scheduling a plurality of time and location specific appointments (tasks, activities, meetings, etc.) using a wireless display device (personal digital assistant) wherein the system/method provides dynamic route guidance information to users based on their current position and the position of scheduled appointments allowing the user to navigate to the scheduled appointment.

- Shilcrat, Esther Dina, U.S. Patent No. 5,963,948, teaches a system and method for forming (generating, displaying, etc.) "personalized, (pre-)planned, multi-node path through a complex physical or virtual area" (route guidance information, tour) in the form of at least dynamic maps, images of the area/route/building and directions to a series of appointments (activities, events, facilities, etc.).

- Chuang, Cliff L., U.S. Patent No. 5, 987,421, teaches a system and method for scheduling one or more services/service requests (reservations, appointments, registrations, etc.) wherein the system manages a plurality of service queues (lines) and enables users, via handheld devices, to view a plurality of queue information including but not limited to a user's position in the queue. More specifically Chuang teaches that the appointment scheduling system and method receives "*The guest is notified of his or her place in line by an appropriate display on his GID device.* The *display will indicate the wait time* associated with that particular attraction. As the wait time runs down to some predesignated time periods, for instance; the final 15 minutes, 10 minutes, and 5 minutes, the GID device will display reminder messages. At an appropriate point in time, the guest will be allowed to enter a specific site which will read his GID device, *log him in as present*, and allow him to wait a short period of time for entry into the attraction. In the event that the guest *misses the registered ride*, suitable programming subroutines can be provided if desired, which will automatically renew the waiting time associated with the attraction." (*emphasis added*).

- Lubin et al., U.S. Patent No. 5,991,730, teach a medical appointment system and method for tracking and recording the movement and status of patient's medical

examination through an ordered series/sequence of medical examination items (e.g. "A typical clinic visit may be considered as a sequence of related interactions between the patient and staff of the service provider."; patient flow). Lubin et al. further teach that the medical appointment/patient flow system and method forms patient status information including indicating the patient's position in the physicians queue.

- Andrews et al., U.S. Patent No. 6,678,613, teach a system and method for scheduling one or more time and location specific appointments comprising a plurality of wireless devices (personal digital assistants) wherein users are provided notices of scheduled based on the user's current location, the scheduled appointment's time/place, travel time and lead/preparation time.

- Seiko Epson Corp., JP200263676, teaches a medical examination system and method for scheduling appointments for patients comprising a plurality of portable information terminals, carried by patients, wherein the progress of the medical examination (care) is monitored and deviations from the schedule are determined.

- Tsubasa System KK, JP 10161193, teaches a trip planning system and method.

- Elshishtawi, Ayman, WO 200186481, teaches a medical examination system and method for scheduling an appointment for patients using queues (multi-dimensional calendar objects).

- Cherverst et al., Experiences developing and Deploying a Context-Aware Tourist Guide (2000) teach a system and method for forming a tour (series of appointments, route, trip, tour, etc.) the system/method comprising: a plurality of

wireless display devices capable of forming guidance information included in the tour/schedule in a form of at least one of dynamic maps and directions (i.e. wayfinding).

- Ancona et al., Mobile computing in a hospital (2000) teach a medical examination system and method comprising a plurality of subsystems including but not limited to workflow and administration. Ancona et al. further teach that the medical examination system/method comprises a plurality of wireless display devices (personal digital assistants) that enable users to schedule appointments (tests, treatments, resources, etc.), record patient information and co-ordinate/synchronize activities/tasks.

- Rosen, Jack, Improve Managed Care Services and the Bottom Line (2000), teaches the application of known wireless technologies to the healthcare industry wherein such technologies provide for a closer "connection" between service providers and patients. More specifically Rosen teaches that providing patients/physicians with wireless devices "makes it possible for patients to schedule doctor's appointments."

- Abowd et al., Cyberguide (1997) teach a system and method for planning and guiding users through a plurality of interrelated appointments/reservations/activities (route, trip, tour, etc.) wherein the system/method comprises: a plurality of wireless display devices and subsystems (components) cartographer, librarian, navigator and messenger. Abowd et al. further teach that the Cyberguide system and method can be "A personal guide to a theme park could make reservations at particular rides, and alert the user when the reservation was available. The device could also tell the user which rides had the shortest lines." as well as notify users of schedule related activities/events.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SJ
2/9/2006

Susanna Diaz

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